

Abstract

It is an object of the invention to provide an arm mechanism for an industrial robot in which backlash can be reduced, a transmission loss of a driving force in a reduction gear can be reduced, and attachment dimensions of a feeding apparatus in the case where a conduit cable is disposed can be made small.

According to the invention, the mechanism has: a driving portion 10 which is separated from an R axis and disposed in a one-end side 3a of an arm portion 3, and in which a harmonic drive reduction gear 9 is coupled to an output shaft of an R-axis motor 8; a driven gear 11 which is supported to be rotatable around the R axis, and which is connected to another end side 3b of the arm portion 3; a passing hole 13 which is disposed along the R axis, and which is passed through the driven gear 11 in a manner that the hole is opened to the outside of the one-end side 3a of the arm portion 3, to communicate with the other-end side 3b of the arm portion 3; and a scissors gear 12 which is disposed on the output shaft of the harmonic drive reduction gear 9, and which meshes with the driven gear 11.